APPENDIX C:

UST PENALTY COMPUTATION EXAMPLES

EXAMPLE 1

BACKGROUND

Inspection Date: April 12, 1990

Facility Name and Description: Ed's Gas and Go is a small gas station in a semi-rural part of the county. The facility has 4 tanks, apparently installed prior to 1965. Judging from the condition of the facility and adjacent store, Ed's income appears to be less than $50,000 per year.

Violations: During the inspection, the inspector observed that Ed failed to provide a method of release detection by the December 22, 1989 deadline, in violation of 40 CFR section 280.40(c).

Owner/Operator Response: Ed claimed no knowledge of the requirements for release detection. After being informed of methods for meeting the requirement, he indicated that he would use annual tank tightness testing and monthly inventory control, in accordance with 40 CFR section 280.41(a)(2). Ed began to conduct adequate monthly inventory control and arranged to have his tanks tested within 10 days.

Previous Actions at Facility: Previously, Ed had been given a warning letter for failure to comply with the notification requirements, but had complied upon receipt of the letter. No other previous violations were identified.

Current Status at Site: The inspector observed that given the age of the tanks, and Ed's previous inability to detect any releases, there was a good chance for a release to occur and go unnoticed for a significant length of time. However, Ed's subsequent tightness tests indicated that the tanks were tight. The geology in the area is fractured shale. There are no drinking water wells or sensitive wildlife receptors within a 5-mile radius of the site.

PENALTY CALCULATION DATA

Violation: 40 CFR section 280.40(c)

Days of violation: 120 days from date of noncompliance (December 22, 1989) to date of compliance (April 22, 1990, which was 10 days after the inspection).

Avoided expenditures: $2.50 per day = $300 for 120 days (estimated cost for labor needed to conduct daily inventory control, based on 1/2 hour labor at $5.00 per hour)

Delayed expenditures: $520 x 4 tanks = $2,080, where the average cost for a tank tightness test is $520. This is considered a delayed expenditure because it was necessary to achieve compliance in this time frame.

Interest rate: 18.1% (the equity discount rate used in the BEN model for 1990).

Tax rate: 15% (the weighted average tax rate for a facility with less than $50,000 annual income).

[NOTE: The numbers used to determine avoided and delayed expenditures were chosen for convenience only. They do not necessarily represent true costs in any State or Region in the country.]

UST PENALTY COMPUTATION WORKSHEET

Assessments for each violation should be determined on separate worksheets and totaled. (If more space is needed, attach separate sheet.)

PART 1 - BACKGROUND

Company name Ed's Gas and Go

Regulation violated 40 CFR section 280.40(c) - Failure to provide release detection by December 22, 1989 phase-in date.

Previous violations Notification violation (1986) - warning letter issued.

Date of requirement 12/22/89

Date of inspection 4/12/90

Date of compliance 4/22/89

Explanation (if appropriate): date of compliance is 10 days after inspection.

1. Days of noncompliance 120
2. Number of tanks 4

PART 2 - ECONOMIC BENEFIT COMPONENT

Avoided Expenditures $300 — Basis: $2.50 per day for monitoring

Delayed Expenditures $2080 — Basis: $520 per tank for tightness test

Weighted Tax Rate 0.15 (15%) — Source: MTR for income < $50,000/year

Interest Rate 0.181 (18%) — Source: BEN model (equity discount rate)

$$\text{AVOIDED COSTS} = \left[\text{Avoided Expenditures} + \frac{\text{Avoided Expenditures} \times \text{Interest} \times \text{Number of Days}}{365\ \text{Days}}\right] \times (1 - \text{Weighted Tax Rate})$$

$$AC = \left[\$300 + \frac{(\$300 \times .181 \times 120)}{365}\right] \times [1 - .15] = \$27\ldots$$

3. Calculated Avoided Cost: $270

UST PENALTY COMPUTATION WORKSHEET

DELAYED COSTS = $\frac{\text{Delayed Expenditures} \times \text{Interest} \times \text{Number of Days}}{\text{365 Days}}$

$$DC = \frac{\$2080 \times .181 \times 120}{365} = \$124$$

4. Calculated Delayed Cost: \$124

5. Economic Benefit Component: \$394 (carry figure to Line 16).
(Line 3 + Line 4)

PART 3 - MATRIX VALUE FOR THE GRAVITY-BASED COMPONENT

Potential for Harm: Major

Extent of Deviation Major

6. Matrix Value (MV): \$1500 (from document page 16 or Appendix A)

7. Per-tank MV: \$6000 (if violation is per facility, the amount on Line 7 will be the same as the amount on Line 6)
(Line 2 x Line 6)

PART 4 - VIOLATOR-SPECIFIC ADJUSTMENTS TO MATRIX VALUE

	Percentage Change (+ or -)	x Matrix Value	= Dollar Adjustment (+ or -)	Justification for Adjustment:
8. Degree of cooperation/ noncooperation	0	\$6000	0	Complied as required following inspection.
9. Degree of willfulness or negligence:	0	\$6000	0	Did not knowingly violate requirements.
10. History of noncompliance:	+5%	\$6000	+\$300	Warning letter issued for previous violation.
11. Unique factors:	0	\$6000	0	
12. Adjusted Matrix Value (Line 7 + Lines 8-11)			\$6300	

UST PENALTY COMPUTATION WORKSHEET

PART 5 - GRAVITY-BASED COMPONENT

Level of Environmental Sensitivity Moderate

Justification: Any release is not likely to have impact on nearby drinking-water sources. Potential impact on the environment would be minimal, although fractured shale would complicate remediation.

13. ESM (from document Page 21) 1.5

14. DNM (from document Page 21) 1.5

GRAVITY-BASED COMPONENT = Adjusted Matrix Value x Environmental Sensitivity Multiplier x Days of Noncompliance Multiplier

GBC = \$6300 x 1.5 x 1.5 = \$14,175

15. Gravity-Based Component: \$14,175
(Line 12 x Line 13 x Line 14)

PART 6 - INITIAL PENALTY TARGET FIGURE

16. Economic Benefit Component \$394
(from Line 5)

17. Gravity-Based Component \$14,175
(from Line 15)

18. Initial Penalty Target Figure \$14,569
(Line 16 + Line 17)

SIGNATURE____________________ DATE____________

EXAMPLE 2

BACKGROUND

Inspection Date: March 20, 1992

Facility Name and Description: Johnson's Petromart, located at Prairie View Lane, is one of eight facilities in a convenience store chain that spans three counties. This facility has a total of 5 USTs, and there are a total of 34 USTs at the 8 facilities. Based on an examination of the parent company's tax returns, it was determined that the company's taxable income was $280,000.

Violations: During the inspection, the inspector observed that the facility had no records of financial assurance coverage as required by the April 26, 1991 deadline. Subsequently, the inspector requested records for each of the 8 Johnson facilities. Upon further investigation, the inspector determined that the owner of the chain, Jack Johnson, had acquired private insurance (the owner did not qualify to self-insure) for the other 7 facilities. At the remaining facility, however, neither the owner nor the operator had obtained the required coverage, thereby constituting a violation of 40 CFR section 280.93(a). This facility is among the oldest in the Johnson's chain and is operated with 4 bare steel UST systems and one cathodically protected UST system. The other 7 facilities were opened subsequent to the interim prohibition and installed USTs that meet the Federal design, construction, and installation requirements. Therefore, obtaining insurance for these USTs was easier than for the facility in violation. The insurance company had indicated that it would be willing to ensure the remaining facility provided that the tanks were retrofitted with spill/overfill protection and cathodic protection.

Owner/Operator Response: Jack Johnson argued that it was the responsibility of the operator to upgrade his USTs so as to make them insurable. The operator of the facility claimed that he lacked the resources to upgrade his USTs and believed that the responsibility for meeting the FR requirements was the owner's. The enforcement staff determined that the owner was aware of his responsibility to insure the USTs at all of his facilities and that only he had the means to do so. The Agency attempted to enter into compliance negotiations with Jack Johnson, but to no avail. The Agency planned to issue an administrative complaint on July 1, 1992.

Previous Actions at Facility: Previously, one of the Johnson's facilities had been issued a warning letter for failure to notify the Agency after bringing a new UST into operation. The owner had complied after receiving the letter. Three other facilities had been issued warning letters for failure to maintain all of the required monitoring records for release detection.

Current Status at Site: At the time of the most recent inspection, it was determined that the facility in violation of the FR requirements had an adequate method of release detection, and no releases were determined to have occurred. The geology in the area of the facility is clay. The facility is located in a semi-residential/commercial area; however, there are no drinking water wells or sensitive wildlife receptors within a 3-mile radius of the site.

PENALTY CALCULATION DATA

Violation: 40 CFR section 280.93(a)

Days of violation: 430 days from date of noncompliance (April 26, 1991) to date of compliance (which, for purposes of assessing the penalty, was determined to be July 1, 1992, to coincide with the date of the administrative complaint).

Avoided expenditures: $27.40 per day = $11,781 for 430 days (estimated insurance premium, based on an annual premium of $2,000 per UST for 5 USTs)

Delayed expenditures: $15,000 x 4 = $60,000 (where the average cost for system retrofit is $15,000). This is considered a delayed cost because retrofitting would enable Johnson's to achieve compliance with the financial responsibility requirement.

Interest rate: 18.1% (the equity discount rate used in the BEN model for 1990).

Tax rate: 33% (the weighted average rate for a facility with $280,000 in taxable income).

[NOTE: The numbers used to determine avoided and delayed expenditures were chosen for convenience only. They do not necessarily represent true costs in any State or Region in the country.]

UST PENALTY COMPUTATION WORKSHEET

Assessments for each violation should be determined on separate worksheets and totaled. (If more space is needed, attach separate sheet.)

PART 1 - BACKGROUND

Company name Johnson's Petromart

Regulation violated 40 CFR section 280.93(a) - Failure to provide full financial coverage by compliance deadline.

Previous violations Notification violation (1989) - warning letter issued; release detection violation (1991) - warning letter issued.

Date of requirement 4/26/91

Date of inspection 3/20/92

Date of compliance 7/1/92

Explanation (if appropriate): date of compliance is considered to be date complaint is issued.

1. Days of noncompliance 430

2. Number of tanks 5 (or 4)*

*(only 4 need to be retrofit)

PART 2 - ECONOMIC BENEFIT COMPONENT

Avoided Expenditures $11,781 Basis: $27.40 per day insurance (5 tanks)

Delayed Expenditures $60,000 Basis: $15,000 per UST retrofit (4 tanks)

Weighted Tax Rate 0.33 (33%) Source: MTR for $280,000 income

Interest Rate 0.181 (18.1%) Source: BEN model (equity discount rate)

$$\text{AVOIDED COSTS} = \left[\text{Avoided Expenditures} + \frac{\text{Avoided Expenditures} \times \text{Interest} \times \text{Number of Days}}{365 \text{ Days}}\right] \times (1 - \text{Weighted Tax Rate})$$

$$AC = \left[\$11{,}781 + \frac{\$11{,}781 \times .181 \times 430}{365}\right] \times (1 - .33) = \$9576$$

3. Calculated Avoided Cost: $9576

UST PENALTY COMPUTATION WORKSHEET

DELAYED COSTS = $\frac{\text{Delayed Expenditures} \times \text{Interest} \times \text{Number of Days}}{\text{365 Days}}$

$$DC = \frac{\$60{,}000 \times .181 \times 430}{365} = \$12{,}794$$

4. Calculated Delayed Cost: $12,794

5. Economic Benefit Component: $22,370 (carry figure to Line 16).
(Line 3 + Line 4)

PART 3 - MATRIX VALUE FOR THE GRAVITY-BASED COMPONENT

Potential for Harm: Moderate

Extent of Deviation: Major

6. Matrix Value (MV): $750 (from document page 16 or Appendix A)

7. Per-tank MV: $750 (if violation is per facility, the amount on Line 7 will be the same as the amount on Line 6)
(Line 2 x Line 6)

PART 4 - VIOLATOR-SPECIFIC ADJUSTMENTS TO MATRIX VALUE

	Percentage Change (+ or -)	x Matrix Value	= Dollar Adjustment (+ or -)	Justification for Adjustment:
8. Degree of cooperation/ noncooperation	+40%	$750	+$300	Owner unwilling to negotiate terms of complian[ce]
9. Degree of willfulness or negligence:	+25%	$750	+$188	Owner was aware of requirement and able to comply.
10. History of noncompliance:	+20%	$750	+$150	Previous violation
11. Unique factors:	0	$750	0	N/A
12. Adjusted Matrix Value (Line 7 + Lines 8-11)			$1388	

UST PENALTY COMPUTATION WORKSHEET

PART 5 - GRAVITY-BASED COMPONENT

Level of Environmental Sensitivity Low

Justification: Potential impact of a release on the environment and drinking-water supplies would be minimal. Clay soil would limit migration of product.

13. ESM (from document Page 21) 1

14. DNM (from document Page 21) 3

GRAVITY-BASED COMPONENT = Adjusted Matrix Value x Environmental Sensitivity Multiplier x Days of Noncompliance Multiplier

GBC = $1388 x 1 x 3 = $4,164

15. Gravity-Based Component: $4164
(Line 12 x Line 13 x Line 14)

PART 6 - INITIAL PENALTY TARGET FIGURE

16. Economic Benefit Component $22,370
(from Line 5)

17. Gravity-Based Component $4164
(from Line 15)

18. Initial Penalty Target Figure $26,534
(Line 16 + Line 17)

SIGNATURE ______________________ DATE ____________

EXAMPLE 3

BACKGROUND

Inspection Date: N/A

Facility Name and Description: Kelly's Kwik Stop is a convenience store that recently had its three USTs taken out of operation. Prior to their removal, the USTs were operated by the owner of the convenience store, Karen Kelly, and owned by Darby Distributors, an oil jobber. The taxable income of Darby Distributors was $400,000 in 1989.

Violations: On May 20, 1989, Ms. Kelly reported the presence of petroleum vapors outside of her convenience store. The Agency investigated the site and confirmed the presence of a petroleum release. Ms. Kelly reported that Darby Distributors had removed the 3 USTs located at her place of business on March 17, 1989; she was not aware of the requirement to notify the Agency prior to permanent closure or of the requirement to conduct a site assessment. Ms. Kelly also could not say whether Darby Distributors had fulfilled these requirements. Upon a review of the Agency's records, it was determined that Darby Distributors had failed to notify the Agency of the closure, thereby constituting a violation of 40 CFR section 280.71. The distributor was also unable to produce records demonstrating compliance with the closure site assessment requirements, constituting a violation of 40 CFR section 280.74. The distributor also failed to assess the site for the presence of a release before permanent closure, in violation of 40 CFR section 280.72(a).

Owner/Operator Response: When the Agency contacted Darby Distributors, they indicated that they would initiate corrective action only if they, and not Ms. Kelly, were actually responsible for the release. The Agency informed them that as the owner of the USTs formerly in operation at Kelly's Kwik Stop they as well as Ms. Kelly are responsible for addressing any release from those USTs. The Agency also informed Darby Distributors that administrative orders were being prepared to compel them to clean up the release and pay penalties for violations of the closure requirements (the Agency was dealing separately with Ms. Kelly). At that time, the company requested to enter into negotiations with the Agency in order to establish a corrective action schedule and determine the amount of the penalties to be assessed.

Previous Actions at Facility: There were no previous incidents of violation at the facility.

Current Status at Site: Kelly's Kwik Stop is located in a rural part of the county. There are, however, two private drinking-water wells within a mile of the facility and several others within 4 miles of the facility. The facility is located one-half mile from a river that is used for recreational purposes as well as by various wildlife as a source of water. The geology in the area of the site is silt.

PENALTY CALCULATION DATA

Violation: 40 CFR section 280.71(a)

Days of Violation: 94 days, from the latest required date of compliance (February 17, 1989) to the actual date of compliance (May 20, 1989), where actual compliance is assumed to be coincident with Ms. Kelly's report to the Agency.

Avoided expenditures: Deemed negligible.

Delayed expenditures: None.

Interest rate: 18.1% (the equity discount rate used in the BEN model for 1989).

Tax rate: 34% (the weighted average rate for a company with taxable income greater than $340,000).

PENALTY CALCULATION DATA

Violation: 40 CFR section 280.72(a)

Days of Violation: 64 days, from the latest required date of compliance (March 17, 1989) to the actual date of compliance (May 20, 1989), where actual compliance is assumed to be coincident with Ms. Kelly's report to the Agency.

Avoided expenditures: $8,500 x 3 USTs = $25,500 (where the average cost for a site assessment at closure is $8,500 per UST).

Delayed expenditures: None.

Interest rate: 18.1% (the equity discount rate used in the BEN model for 1989).

Tax rate: 34% (the weighted average rate for a company with taxable income greater than $340,000).

PENALTY CALCULATION DATA

Violation: 40 CFR section 280.74

Days of Violation: 64 days, from the latest required date of compliance (March 17, 1989) to the actual date of compliance (May 20, 1989), where actual compliance is assumed to be coincident with Ms. Kelly's report to the Agency.

Avoided expenditures: None.

Delayed expenditures: Deemed negligible.

Interest rate: 18.1% (the equity discount rate used in the BEN model for 1989).

Tax rate: 34% (the weighted average rate for a company with taxable income greater than $340,000).

[NOTE: The numbers used to determine avoided and delayed expenditures were chosen for convenience only. They do not necessarily represent true costs in any State or Region in the country.]

UST PENALTY COMPUTATION WORKSHEET

Assessments for each violation should be determined on separate worksheets and totaled. (If more space is needed, attach separate sheet.)

PART 1 - BACKGROUND

Company name: Darby Distributors

Regulation violated: 40 CFR section 280.71 (a) - Failure to notify 30 days prior to tank closure.

Previous violations: None

Date of requirement: 2/15/89

Date of inspection: N/A

Date of compliance: 5/20/89

Explanation (if appropriate):

1. Days of noncompliance: 94
2. Number of tanks: 3

PART 2 - ECONOMIC BENEFIT COMPONENT

Avoided Expenditures: 0

Basis: Costs for notification negligible.

Delayed Expenditures: N/A

Basis:

Weighted Tax Rate: N/A

Source:

Interest Rate: N/A

Source:

$$\text{AVOIDED COSTS} = \left[\text{Avoided Expenditures} + \frac{\text{Avoided Expenditures} \times \text{Interest} \times \text{Number of Days}}{365 \text{ Days}}\right] \times (1 - \text{Weighted Tax Rate})$$

3. Calculated Avoided Cost: $0

UST PENALTY COMPUTATION WORKSHEET

DELAYED COSTS = $\frac{\text{Delayed Expenditures} \times \text{Interest} \times \text{Number of Days}}{\text{365 Days}}$

4. Calculated Delayed Cost: $0

5. Economic Benefit Component: $0 (carry figure to Line 16).
(Line 3 + Line 4)

PART 3 - MATRIX VALUE FOR THE GRAVITY-BASED COMPONENT

Potential for Harm: Major

Extent of Deviation: Major

6. Matrix Value (MV): $1500 (from document page 16 or Appendix A)

7. Per-tank MV: $1500 (if violation is per facility, the amount on Line 7 will be the same as the amount on Line 6)
(Line 2 x Line 6)

PART 4 - VIOLATOR-SPECIFIC ADJUSTMENTS TO MATRIX VALUE

	Percentage Change (+ or -)	x Matrix Value	= Dollar Adjustment (+ or -)	Justification for Adjustment:
8. Degree of cooperation/ noncooperation	+ 10%	$1500	+ $150	Owner requested negotiations only after being warned of impending administrative on
9. Degree of willfulness or negligence:	+ 40%	$1500	+ $600	Owner appeared to take advantage of operator's ignorance of requirements
10. History of noncompliance:	0	$1500	0	N/A
11. Unique factors:	0	$1500	0	N/A
12. Adjusted Matrix Value (Line 7 + Lines 8-11)			$2250	

UST PENALTY COMPUTATION WORKSHEET

PART 5 - GRAVITY-BASED COMPONENT

Level of
Environmental Sensitivity High

Justification: Release could impact several drinking-water wells and a river used by humans for recreation and by wildlife as a source of drinking water.

13. ESM (from document Page 21) 2

14. DNM (from document Page 21) 1.5

GRAVITY-BASED COMPONENT = Adjusted Matrix Value x Environmental Sensitivity Multiplier x Days of Noncompliance Multiplier

GBC = \$2250 × 2 × 1.5 = \$6750

15. Gravity-Based Component: \$6750
(Line 12 x Line 13 x Line 14)

PART 6 - INITIAL PENALTY TARGET FIGURE

16. Economic Benefit Component 0
(from Line 5)

17. Gravity-Based Component \$6750
(from Line 15)

18. Initial Penalty Target Figure \$6750
(Line 16 + Line 17)

SIGNATURE __________ DATE __________

UST PENALTY COMPUTATION WORKSHEET

Assessments for each violation should be determined on separate worksheets and totaled. (If more space is needed, attach separate sheet.)

PART 1 - BACKGROUND

Company name Darby Distributors

Regulation violated 40 CFR section 280.72(a)- Failure to assess site at tank closure.

Previous violations None

Date of requirement 3/17/89.

Date of inspection N/A

Date of compliance 5/20/89

Explanation (if appropriate):

1. Days of noncompliance 64

2. Number of tanks 3

PART 2 - ECONOMIC BENEFIT COMPONENT

Avoided Expenditures $25,500

Basis: $8500 per UST site assessment

Delayed Expenditures N/A

Basis:

Weighted Tax Rate 0.34 (34%)

Source: MTR for income > $335,000

Interest Rate 0.181 (18.1%)

Source: BEN model (equity discount rate)

$$\textbf{AVOIDED COSTS} = \left[\text{Avoided Expenditures} + \frac{\text{Avoided Expenditures} \times \text{Interest} \times \text{Number of Days}}{\text{365 Days}}\right] \times (1 - \text{Weighted Tax Rate})$$

$$AC = \left[\$25,500 + \frac{\$25,500 \times .181 \times 64}{365}\right] \times (1-.34) = \$17,364$$

3. Calculated Avoided Cost: $17,364

UST PENALTY COMPUTATION WORKSHEET

DELAYED COSTS = $\dfrac{\text{Delayed Expenditures} \times \text{Interest} \times \text{Number of Days}}{\text{365 Days}}$

4. Calculated Delayed Cost: 0

5. Economic Benefit Component: $17,364 (carry figure to Line 16).
(Line 3 + Line 4)

PART 3 - MATRIX VALUE FOR THE GRAVITY-BASED COMPONENT

Potential for Harm: Major

Extent of Deviation Major

6. Matrix Value (MV): $1500 (from document page 16 or Appendix A)

7. Per-tank MV: $6000 (if violation is per facility, the amount on Line 7 will be the same as the amount on Line 6)
(Line 2 x Line 6)

PART 4 - VIOLATOR-SPECIFIC ADJUSTMENTS TO MATRIX VALUE

	Percentage Change (+ or -)	x Matrix Value	= Dollar Adjustment (+ or -)	Justification for Adjustment:
8. Degree of cooperation/ noncooperation	+10%	$6000	+$600	Owner requested negotiation only after being warned c impending administrative o
9. Degree of willfulness or negligence:	+40%	$6000	+$2400	Owner appeared to take advantage of operators ignorance of requirements.
10. History of noncompliance:	0	$6000	0	N/A
11. Unique factors:		$6000	0	N/A
12. Adjusted Matrix Value (Line 7 + Lines 8-11)			$9000	

UST PENALTY COMPUTATION WORKSHEET

PART 5 - GRAVITY-BASED COMPONENT

Level of Environmental Sensitivity High

Justification: Release could impact several drinking-water wells and a river used by humans for recreation and by wildlife as a source of drinking water.

13. ESM (from document Page 21) 2

14. DNM (from document Page 21) 1

GRAVITY-BASED COMPONENT = Adjusted Matrix Value x Environmental Sensitivity Multiplier x Days of Noncompliance Multiplier

GBC = $9000 x 2 x 1 = $18,000.

15. Gravity-Based Component: $18,000
(Line 12 x Line 13 x Line 14)

PART 6 - INITIAL PENALTY TARGET FIGURE

16. Economic Benefit Component $17,364
(from Line 5)

17. Gravity-Based Component $18,000
(from Line 15)

18. Initial Penalty Target Figure $35,364
(Line 16 + Line 17)

SIGNATURE ______________________ DATE ____________

UST PENALTY COMPUTATION WORKSHEET

Assessments for each violation should be determined on separate worksheets and totaled. (If more space is needed, attach separate sheet.)

PART 1 - BACKGROUND

Company name: Darby Distributors

Regulation violated: 40 CFR section 280.74 - Failure to maintain records capable of demonstrating compliance with tank closure requirements.

Previous violations: None

Date of requirement: 3/17/89

Date of inspection: N/A

Date of compliance: 5/20/89

Explanation (if appropriate):

1. Days of noncompliance: 64
2. Number of tanks: 3

PART 2 - ECONOMIC BENEFIT COMPONENT

Avoided Expenditures: N/A — Basis:

Delayed Expenditures: 0 — Basis: Cost of record keeping negligible.

Weighted Tax Rate: N/A — Source:

Interest Rate: N/A — Source:

$$\text{AVOIDED COSTS} = \left[\text{Avoided Expenditures} + \frac{\text{Avoided Expenditures} \times \text{Interest} \times \text{Number of Days}}{365 \text{ Days}}\right] \times (1 - \text{Weighted Tax Rate})$$

3. Calculated Avoided Cost: $0

UST PENALTY COMPUTATION WORKSHEET

DELAYED COSTS = $\frac{\text{Delayed Expenditures x Interest x Number of Days}}{\text{365 Days}}$

4. Calculated Delayed Cost: $0

5. Economic Benefit Component: $0 (carry figure to Line 16).
(Line 3 + Line 4)

PART 3 - MATRIX VALUE FOR THE GRAVITY-BASED COMPONENT

Potential for Harm: Major

Extent of Deviation Major

6. Matrix Value (MV): $1500 (from document page 16 or Appendix A)

7. Per-tank MV: $1500 (if violation is per facility, the amount on Line 7 will be the same as the amount on Line 6)
(Line 2 x Line 6)

PART 4 - VIOLATOR-SPECIFIC ADJUSTMENTS TO MATRIX VALUE

	Percentage Change (+ or -)	x Matrix Value	= Dollar Adjustment (+ or -)	Justification for Adjustment:
8. Degree of cooperation/ noncooperation	+10%	$1500	+$150	Owner requested negotiatio only after being warned o impending administrative orde
9. Degree of willfulness or negligence:	+40%	$1500	+$600	Owner appeared to take advantage of operator's ignorance of requirements
10. History of noncompliance:	0	$1500	0	N/A
11. Unique factors:	0	$1500	0	N/A

12. Adjusted Matrix Value $2250
(Line 7 + Lines 8-11)

UST PENALTY COMPUTATION WORKSHEET

PART 5 - GRAVITY-BASED COMPONENT

Level of
Environmental Sensitivity High

Justification: Release could impact several drinking-water wells and a river used by humans for recreation and by wildlife as a source of drinking water.

13. ESM (from document Page 21) 2

14. DNM (from document Page 21) 1

GRAVITY-BASED COMPONENT = Adjusted Matrix Value x Environmental Sensitivity Multiplier x Days of Noncompliance Multiplier

GBC = \$2250 × 2 × 1 = \$4500

15. Gravity-Based Component: \$4500
(Line 12 x Line 13 x Line 14)

PART 6 - INITIAL PENALTY TARGET FIGURE

16. Economic Benefit Component \$0
(from Line 5)

17. Gravity-Based Component \$4500
(from Line 15)

18. Initial Penalty Target Figure \$4500
(Line 16 + Line 17)

Total Initial Penalty Target for Darby Distributors:
= Violation #1 + Violation #2 + Violation #3
= \$6750 + \$35,364 + \$4500 = \$46,614

SIGNATURE ____________________ DATE ____________

EXAMPLE 4

BACKGROUND

Inspection Date: December 15, 1991

Facility Name and Description: Jerry's Gas and Grocery is a medium-sized facility in a commercial section of town. The facility has 4 USTs, 3 of which were installed in 1968 and one in 1989. It was estimated that the company's taxable income was $70,000 in 1990.

Violations: On October 16, 1991, the Agency discovered that Jerry's Gas and Grocery had a release. At the time of the release, an adequate method of release detection was not in use at the facility, constituting a violation of 40 CFR section 280.40(c) for the 3 tanks installed in 1968. The Agency sent written notification (after informing the owner of the release by telephone) of the release to the facility and requested, among other things, that the facility report evidence of financial responsibility within 30 days. While conducting a file review on December 15, the compliance staff observed that the facility had failed to report this evidence, in violation of 40 CFR section 280.106(a)(1). A site inspection conducted on this date indicated that an adequate method of release detection was still not in use.

Owner/Operator Response: When notified of these violations, the owner submitted evidence that he had acquired a letter of credit from a bank to meet the FR requirement and began to conduct inventory control and daily monitoring immediately, and arranged for tank tightness tests. The owner, however, had failed to initiate corrective actions (beyond the initial abatement measures) for lack of funds. The owner's failure to report his financial assurance mechanism within the required time period, therefore, delayed the contacting of the bank and the collection of funds with which to initiate corrective action.

Previous Actions at Facility: In 1989, the facility was assessed penalties for failure to notify the Agency of the new UST installation.

Current Status at Site: Because an adequate method of release detection was not in operation, the release went undetected for a matter of months. The geology in the area of the facility is fractured shale. The facility is located in a commercial area. There are no drinking water wells or sensitive wildlife receptors within a 5-mile radius of the site.

PENALTY CALCULATION DATA

Violation: 40 CFR section 280.40(c)

Days of violation: 358 days, from the latest required date of compliance (December 22, 1990) to the actual date of compliance (December 15, 1991).

Avoided expenditures: $2455 total = $895 labor for 358 days, at $2.50 per day (estimated cost for labor needed to conduct daily inventory control based on 1/2 hour labor at $5.00 per hour) + $1560 for tightness testing for 3 tanks (where the average cost for tank tightness testing is $520 per tank).

Delayed expenditures: None.

Interest rate: 18.1% (the equity discount rate used in the BEN model for 1991).

Tax rate: 18% (the weighted average rate for a company with taxable income of $70,000).

PENALTY CALCULATION DATA

Violation: 40 CFR section 280.106(a)(1)

Days of Violation: 30 days from the latest required date of compliance (November 15, 1991) to the actual date of compliance (December 15, 1991).

Avoided expenditures: $8219 = Amount of interest avoided on $1,000,000 letter of credit because of failure to provide the Agency with evidence of financial responsibility (based on 30 days of interest at 10%, the rate charged by Jerry's bank for letter of credit drawdown).

Delayed expenditures: None.

Interest rate: 18.1% (the equity discount rate used in the BEN model for 1990 and 1991).

Tax rate: 18% (the weighted average rate for a company with taxable income of $70,000).

[NOTE: The numbers used to determine avoided and delayed expenditures were chosen for convenience only. They do not necessarily represent true costs in any State or Region in the country.]

UST PENALTY COMPUTATION WORKSHEET

Assessments for each violation should be determined on separate worksheets and totaled. (If more space is needed, attach separate sheet.)

PART 1 - BACKGROUND

Company name Jerry's Gas & Grocery

Regulation violated 40 CFR section 280.40 (a)(1) - Failure to have release detection by compliance date (12/22/90).

Previous violations Notification (1989) - penalties assessed for failure to notify of new UST installation.

Date of requirement 12/22/90 Date of inspection 12/15/91

Date of compliance 12/15/91 Explanation (if appropriate):

1. Days of noncompliance 358
2. Number of tanks 4 (or 3)* *(only 3 tanks require release detection).

PART 2 - ECONOMIC BENEFIT COMPONENT

Avoided Expenditures $2455 Basis: $2.50 per day for monitoring, $520 per UST tightness test } × 3

Delayed Expenditures N/A Basis: N/A

Weighted Tax Rate 0.18 (18%) Source: MTR for income of $70,000

Interest Rate 0.181 (18.1%) Source: BEN model (equity discount rate)

$$\text{AVOIDED COSTS} = \left[\text{Avoided Expenditures} + \frac{\text{Avoided Expenditures} \times \text{Interest} \times \text{Number of Days}}{365 \text{ Days}}\right] \times (1 - \text{Weighted Tax Rate})$$

$$AC = \left[\$2455 + \frac{\$2455 \times .181 \times 358}{365}\right] \times (1 - .18) = \$2370$$

3. Calculated Avoided Cost: $2370

UST PENALTY COMPUTATION WORKSHEET

DELAYED COSTS = $\frac{\text{Delayed Expenditures} \times \text{Interest} \times \text{Number of Days}}{\text{365 Days}}$

4. Calculated Delayed Cost: 0

5. Economic Benefit Component: $2370 (carry figure to Line 16).
(Line 3 + Line 4)

PART 3 - MATRIX VALUE FOR THE GRAVITY-BASED COMPONENT

Potential for Harm: Major

Extent of Deviation: Major

6. Matrix Value (MV): $1500 (from document page 16 or Appendix A)

7. Per-tank MV: $4500 (if violation is per facility, the amount on Line 7 will be the same as the amount on Line 6)
(Line 2 x Line 6)

PART 4 - VIOLATOR-SPECIFIC ADJUSTMENTS TO MATRIX VALUE

	Percentage Change (+ or -)	x Matrix Value	= Dollar Adjustment (+ or -)	Justification for Adjustment:
8. Degree of cooperation/ noncooperation	0	$4500	0	Complied as required following notification.
9. Degree of willfulness or negligence:	0	$4500	0	N/A
10. History of noncompliance:	+30%	$4500	+$1350	Previous violation involving penalties
11. Unique factors:	0	$4500	0	
12. Adjusted Matrix Value (Line 7 + Lines 8-11)			$5850	

UST PENALTY COMPUTATION WORKSHEET

PART 5 - GRAVITY-BASED COMPONENT

Level of
Environmental Sensitivity Moderate

Justification: Release is not likely to have impact on ground or surface water. Potential impact on the environment is minimal, although potential human receptors are present. Fractured shale would complicate remediation.

13. ESM (from document Page 21) 1.5

14. DNM (from document Page 21) 2.5

GRAVITY-BASED COMPONENT = Adjusted Matrix Value x Environmental Sensitivity Multiplier x Days of Noncompliance Multiplier

GBC = $5850 × 1.5 × 2.5 = $21,938

15. Gravity-Based Component: $21,938
(Line 12 x Line 13 x Line 14)

PART 6 - INITIAL PENALTY TARGET FIGURE

16. Economic Benefit Component $2370
(from Line 5)

17. Gravity-Based Component $21,938
(from Line 15)

18. Initial Penalty Target Figure $24,308
(Line 16 + Line 17)

SIGNATURE____________________ DATE__________

UST PENALTY COMPUTATION WORKSHEET

Assessments for each violation should be determined on separate worksheets and totaled. (If more space is needed, attach separate sheet.)

PART 1 - BACKGROUND

Company name Jerry's Gas & Grocery

Regulation violated 40 CFR section 280.106(a)(1) - Failure to report evidence of financial assurance within 30 days of discovering a release.

Previous violations Notification (1989) - penalties assessed for failure to notify of new UST installation.

Date of requirement 11/15/91

Date of inspection 12/15/91

Date of compliance 12/15/91

Explanation (if appropriate):

1. Days of noncompliance 30
2. Number of tanks 4

PART 2 - ECONOMIC BENEFIT COMPONENT

Avoided Expenditures $8219

Basis: Avoided interest that would have be paid on $1,000,000 letter of credit for

Delayed Expenditures 0

Basis: Negligible

Weighted Tax Rate 0.18 (18%)

Source: MTR for income of $70,000

Interest Rate 0.181 (18.1%)

Source: BEN model (equity discount rate)

$$\text{AVOIDED COSTS} = \left[\text{Avoided Expenditures} + \frac{\text{Avoided Expenditures} \times \text{Interest} \times \text{Number of Days}}{365 \text{ Days}} \right] \times (1 - \text{Weighted Tax Rate})$$

$$AC = \left[\$8219 + \frac{\$8219 \times .181 \times 30}{365} \right] \times (1 - .18) = \$6840$$

3. Calculated Avoided Cost: $6840

UST PENALTY COMPUTATION WORKSHEET

DELAYED COSTS = $\frac{\text{Delayed Expenditures} \times \text{Interest} \times \text{Number of Days}}{\text{365 Days}}$

4. Calculated Delayed Cost: 0

5. Economic Benefit Component: $6840 (carry figure to Line 16).
(Line 3 + Line 4)

PART 3 - MATRIX VALUE FOR THE GRAVITY-BASED COMPONENT

Potential for Harm: Moderate

Extent of Deviation Major

6. Matrix Value (MV): $750 (from document page 16 or Appendix A)

7. Per-tank MV: $750 (if violation is per facility, the amount on Line 7 will be the same as the amount on Line 6)
(Line 2 x Line 6)

PART 4 - VIOLATOR-SPECIFIC ADJUSTMENTS TO MATRIX VALUE

	Percentage Change (+ or -)	x Matrix Value	= Dollar Adjustment (+ or -)	Justification for Adjustment:
8. Degree of cooperation/ noncooperation	0	$750	0	Complied as required following notification
9. Degree of willfulness or negligence:	0	$750	0	N/A
10. History of noncompliance:	+30%	$750	+$225	Previous violation involving penalties
11. Unique factors:	0	$750	0	
12. Adjusted Matrix Value (Line 7 + Lines 8-11)			$975	

UST PENALTY COMPUTATION WORKSHEET

PART 5 - GRAVITY-BASED COMPONENT

Level of
Environmental Sensitivity Moderate

Justification: Release is not likely to have impact on ground or surface water. Potential impact on the environment is minimal, although potential human receptors are present. Fractured shale would complicate remediation.

13. ESM (from document Page 21) 1.5

14. DNM (from document Page 21) 1.0

GRAVITY-BASED COMPONENT = Adjusted Matrix Value x Environmental Sensitivity Multiplier x Days of Noncompliance Multiplier

GBC = $975 x 1.5 x 1 = $1462

15. Gravity-Based Component: $1462
(Line 12 x Line 13 x Line 14)

PART 6 - INITIAL PENALTY TARGET FIGURE

16. Economic Benefit Component $6840
(from Line 5)

17. Gravity-Based Component $1462
(from Line 15)

18. Initial Penalty Target Figure $8302
(Line 16 + Line 17)

Total Initial Penalty Target for Jerry's Gas & Grocery
= Violation #1 + Violation #2
= $24,308 + $8302
= $32,610

SIGNATURE ______________________ DATE ______________

EXAMPLE 5

BACKGROUND

Inspection Date: January 8, 1990

Facility Name and Description: The Mammoth Oil facility located at 345 Pine Street has 5 USTs and is owned and operated by Mammoth Oil Company, a national petroleum marketer with taxable income over $335,000.

Violations: Upon inspection of the facility, the Agency discovered that 2 new bare steel USTs were installed on November 15, 1989 without cathodic protection. This omission constituted a violation of 40 CFR section 280.20(a)(2)(ii). The tanks failed to meet the performance standards specified in section 280.20(a)(2)(ii), or any of the codes or standards outlined by the regulations as acceptable for compliance.

Owner/Operator Response: When notified of the violation, the company's attorneys asked to enter into negotiations to determine the schedule and terms of compliance, as well as any penalties that might be assessed. The result of the negotiations was a consent order in which the owner agreed to install properly designed cathodic protection (in accordance with the National Association of Corrosion Engineers Standard RP-02-85) and pay the penalty by March 1, 1990.

Previous Actions at Facility: The facility was issued a notice of violation in 1987 for failure to notify the Agency of a new UST installation. In 1988, the company was issued two administrative orders, one compelling remediation of a release and the other assessing penalties for failure to report the release to the Agency.

Current Status at Site: At the time of the inspection, the facility was conducting a method of release detection in accordance with the requirements. The Agency determined that it was unlikely that there was a release at the present time. The geology in the area of the facility is gravel. The facility is located in an urban residential area. There are no drinking water wells or sensitive wildlife receptors within a 3-mile radius of the area.

PENALTY CALCULATION DATA

Violation: 40 CFR section 280.20(a)(2)(ii)

Days of violation: 105 days, from the required date of compliance (November 15, 1989) to the actual date of compliance (March 1, 1990).

Avoided expenditures: None.

Delayed expenditures: $3,050 x 2 USTs = $6,100 (where the average cost for installation of a cathodic protection system is $3,050 per UST).

Interest rate: 18.1% (the equity discount rate used in the BEN model for 1990).

Tax rate: 34% (the weighted average rate for a company with taxable income of $335,000).

[NOTE: The numbers used to determine avoided and delayed expenditures were chosen for convenience only. They do not necessarily represent true costs in any State or Region in the country.]

UST PENALTY COMPUTATION WORKSHEET

Assessments for each violation should be determined on separate worksheets and totaled. (If more space is needed, attach separate sheet.)

PART 1 - BACKGROUND

Company name: Mammoth Oil Company

Regulation violated: 40 CFR section 280.20(a)(2) - Failure to meet performance standards for cathodic protection

Previous violations: Release notification (1987) - two administrative orders issued (one to compel cleanup & one to assess penalties)

Date of requirement: 11/15/89

Date of inspection: 1/8/90

Date of compliance: 3/1/90

Explanation (if appropriate):

1. Days of noncompliance: 105
2. Number of tanks: 2

PART 2 - ECONOMIC BENEFIT COMPONENT

Avoided Expenditures: N/A

Basis:

Delayed Expenditures: $6100

Basis: Cost for cathodic protection

Weighted Tax Rate: 0.34 (34%)

Source: MTR for income > $335,000

Interest Rate: 0.181 (18.1%)

Source: BEN model (equity discount rate)

$$\text{AVOIDED COSTS} = \left[\text{Avoided Expenditures} + \frac{\text{Avoided Expenditures} \times \text{Interest} \times \text{Number of Days}}{365 \text{ Days}}\right] \times (1 - \text{Weighted Tax Rate})$$

3. Calculated Avoided Cost: 0

UST PENALTY COMPUTATION WORKSHEET

DELAYED COSTS = $\frac{\text{Delayed Expenditures x Interest x Number of Days}}{\text{365 Days}}$

$$DC = \frac{\$6100 \times .181 \times 105}{365} = \$318$$

4. Calculated Delayed Cost: $318

5. Economic Benefit Component: $318 (carry figure to Line 16).
(Line 3 + Line 4)

PART 3 - MATRIX VALUE FOR THE GRAVITY-BASED COMPONENT

Potential for Harm: Moderate

Extent of Deviation: Moderate

6. Matrix Value (MV): $500 (from document page 16 or Appendix A)

7. Per-tank MV: $1000 (if violation is per facility, the amount on Line 7 will be the same as the amount on Line 6)
(Line 2 x Line 6)

PART 4 - VIOLATOR-SPECIFIC ADJUSTMENTS TO MATRIX VALUE

	Percentage Change (+ or -)	x Matrix Value	= Dollar Adjustment (+ or -)	Justification for Adjustment:
8. Degree of cooperation/ noncooperation	0	$1000	0	Company agreed to enter in negotiations and pay penal[illegible]
9. Degree of willfulness or negligence:	+50%	$1000	+$500	As national marketers, compa[illegible] would have been aware of the requirements
10. History of noncompliance:	+50%	$1000	+$500	Previous violation with two administrative orders.
11. Unique factors:	0	$1000	0	N/A
12. Adjusted Matrix Value (Line 7 + Lines 8-11)			$2000	

UST PENALTY COMPUTATION WORKSHEET

PART 5 - GRAVITY-BASED COMPONENT

Level of
Environmental Sensitivity Moderate

Justification: Facility is located in residential area with no nearby drinking-water wells or wildlife receptors. However, gravel would permit migration of released product.

13. ESM (from document Page 21) 1.5

14. DNM (from document Page 21) 1.5

GRAVITY-BASED COMPONENT = Adjusted Matrix Value x Environmental Sensitivity Multiplier x Days of Noncompliance Multiplier

GBC = $2000 x 1.5 x 1.5 = $4500

15. Gravity-Based Component: $4500
(Line 12 x Line 13 x Line 14)

PART 6 - INITIAL PENALTY TARGET FIGURE

16. Economic Benefit Component $ 318
(from Line 5)

17. Gravity-Based Component $4500
(from Line 15)

18. Initial Penalty Target Figure $4818
(Line 16 + Line 17)

SIGNATURE ______________________ DATE __________